

**COMPUTER SYSTEMS AND METHODS FOR CONSTRUCTING  
BIOLOGICAL CLASSIFIERS AND USES THEREOF  
ABSTRACT OF THE INVENTION**

5       The present invention provides systems and method for constructing  
classifiers that distinguish between trait subgroups using molecular marker data  
from blood samples. The invention further encompasses the use of the classifiers  
and combinations of molecular markers identified by the classifiers in a wide variety  
of applications including: diagnosis; prognosis; prediction of disease, stage of  
disease or disease risk; monitoring disease progression and/or regression;  
10       monitoring disease reoccurrence and identifying risk of disease reoccurrence;  
determining and/or predicting response to treatment and/or treatment outcomes;  
monitoring and/or predicting treatment compliance or non compliance and the like.  
The invention further provides a variety of selected molecular markers and a means  
to identify combinations of the selected molecular markers useful for diagnosing  
15       particular traits of interest.